



{In Archive} RE: Updated Listing of Chlor-Alkali facilities in the USA using  
Asbestos Diaphragm Technology

Sheila Canavan to: Art Dungan

08/19/2008 08:36 AM

Cc: Brian Symmes

Archive: This message is being viewed in an archive.

Thanks for the information, Art. Have a great day.

Sheila Canavan  
National Program Chemicals Division  
USEPA  
Phone 202/566-1978  
Fax 202/566-0473  
Mail Code 7404 T  
"Art Dungan" <arthurdungan@cl2.com>



"Art Dungan"  
<arthurdungan@cl2.com>

08/15/2008 04:09 PM

To Sheila Canavan/DC/USEPA/US@EPA

cc Brian Symmes/DC/USEPA/US@EPA

Subject RE: Updated Listing of Chlor-Alkali facilities in the USA using  
Asbestos Diaphragm Technology

Sheila,

The Chlorine Institute offers the following in response to your e-mails of yesterday:

*Congressman Dingell's requests:*

*Please provide a list of United States facilities that still use asbestos diaphragms.*

The list provided you as of December 20, 2007 has been slightly modified and is attached. We have requested our members to provide any changes to this list. We will advise you of any additional reports of changes.

*Please indicate the total number of diaphragm production units at the facility, along with the number that use asbestos diaphragms vs. the number that have used an asbestos substitute or alternative type of diaphragm;*

*a. Please state the year that the facility began operating;*

The attached Table 1 from the Chlorine Institute publication Pamphlet 10, *North American Chlor-Alkali Plants and Production Reports - 2007* provides some information concerning this request. This is the only information that the Institute has.

Congressman Barton's question:

*Are all chlor-alkali facilities which use asbestos diaphragms operating in the United States using the same exact products and processes?*

The chlor-alkali facilities which use asbestos diaphragms do not use the same products and processes. Preparation of the asbestos diaphragm for these plants is more of an art than a science. While the diaphragms may look similar, they all do not have the exact same composition. The percentage of asbestos in the diaphragm may vary as can the thickness of the diaphragm. There may be other materials in the diaphragm which can vary by facility. The Chlorine Institute does not have any further information concerning any of these details.

The chlor-alkali processes employing the asbestos diaphragms are all different. A review of the attached Table 1 shows a variety of diaphragm cell types (e.g., OxyTech H2A, OxyTech H4, Glanor 1144). The type of cell and the amount of current utilized at the facility affect the amount of chlorine and co-products produced. This design as well as other factors such as the current density has a significant affect in evaluating the feasibility of replacing the asbestos diaphragm with a non-asbestos diaphragm or with membrane cell technology. These are factors that each individual facility must evaluate. As trade association, the Chlorine Institute can not be involved in such issues.

The Institute has separately forwarded your e-mails to our members that employ asbestos diaphragm chlor-alkali technology in the USA and requested that they provide any additional information they may have directly to you.

Regards,

Regards,

Arthur E. Dungan  
President  
The Chlorine Institute, Inc.  
1300 Wilson Boulevard  
Arlington, VA 22209

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-----Original Message-----

From: Canavan.Sheila@epamail.epa.gov [mailto:Canavan.Sheila@epamail.epa.gov]

Sent: Thursday, August 14, 2008 11:55 AM

To: Art Dungan

Cc: Symmes.Brian@epamail.epa.gov

Subject: Fw: Updated Listing of Chlor-Alkali facilities in the USA using Asbestos Diaphragm Technology

Hi Art,

Another one of the questions relates to the chlor-alkali industry as well. This one is from Mr. Barton:

Are all chlor-alkali facilities which use asbestos diaphragms operating in the United States using the same exact products and processes?

Sheila Canavan  
National Program Chemicals Division  
USEPA  
Phone 202/566-1978  
Fax 202/566-0473  
Mail Code 7404 T

----- Forwarded by Sheila Canavan/DC/USEPA/US on 08/14/2008 11:51 AM

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Sheila  
Canavan/DC/USEPA  
/US To  
"Art Dungan"  
08/14/2008 09:35 <arthurdungan@cl2.com>  
AM cc  
Brian Symmes/DC/USEPA/US@EPA  
Subject  
Re: Updated Listing of  
Chlor-Alkali facilities in the  
USA using Asbestos Diaphragm  
Technology(Document link: Sheila  
Canavan)

Hi Art,

We've had some questions for the record from the House Energy and Commerce Committee as a follow up to their February 2008 hearing, and one of the questions relates to the Chlor Alkali industry. I could really use your help on some of the answers. The first question is to list the facilities in the U.S. that still use asbestos diaphragms and we will include the info you provided last December (below) in response to that one. There are some details they would like to know that I don't have handy. Any help you can offer re: the dates facilities began operating or the number of production units at each facility would be helpful. The TRI staff is answering the part c. of the question for the facilities you cited last December, so I think that is covered. The question in its entirety is attached. Give me a call if you want to discuss further. We're kind of on a tight turn around time, so the sooner we can get the info, the better.

Thanks in advance for your help, Art.

--Sheila Canavan

(See attached file: Dingell chlor alkali q.doc)

Sheila Canavan  
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"Art Dungan"  
<arthurdungan@cl  
2.com>  
To  
Ellie McCann/DC/USEPA/US@EPA,  
12/20/2007 05:21 PM Sheila Canavan/DC/USEPA/US@EPA  
cc  
Subject  
Updated Listing of Chlor-Alkali  
facilities in the USA using  
Asbestos Diaphragm Technology

Ellie and Sheila,

This e-mail updates the e-mail I sent you on November 28. We surveyed our members to get the most current information. Asbestos Diaphragm cell technology still represents about 60% of USA chlorine production.

All the best to you during this Holiday Season and in the New Year,

Art

Arthur E. Dungan  
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From: Art Dungan  
Sent: Thursday, December 20, 2007 5:13 PM  
To: Ann Strickland (ann.strickland@mail.house.gov)  
Subject: Updated Listing of Chlor-Alkali facilities in the USA using  
Asbestos Diaphragm Technology

Ann,

In follow up to your request and our phone conversation see the attached list.

(See attached file: Cl2 Plants using Asbestos Technology Final Dec 20,



2007.doc) Cl2 Plants using Asbestos Technology Modified from Dec 20, 2007.doc Table 1 only as of January 1, 2008.pdf



## **Chlorine Plants in the United States Using Asbestos Technology**

### **Preliminary as of August 15, 2008**

#### **Alabama**

McIntosh - Olin Corporation

#### **Indiana**

Mt. Vernon - SABIC (formerly GE) –This plant is in the process of converting to non-asbestos diaphragms. Completion is scheduled for the fourth quarter 2008

#### **Kansas**

Wichita - Occidental Chemical Corp.

#### **Louisiana**

Convent - Occidental Chemical Corp.

Lake Charles - PPG Industries, Inc

Plaquemine - Dow Chemical

Plaquemine - Georgia Gulf Corporation

Taft - Occidental Chemical Corp.

#### **Nevada**

Henderson - Olin (formerly Pioneer)

#### **New York**

Niagara Falls - Occidental Chemical Corp.

#### **Texas**

Ingleside - Occidental Chemical Corp.

Freeport - Dow Chemical

La Porte - Occidental Chemical Corp.

#### **West Virginia**

New Martinsville - PPG Industries, Inc.

Basis: Survey of members on December 19, 2007 with partial additional responses as of August 15, 2008

**Table 1: Chlorine Plants in the United States (Not including plants being built)**

<u>STATE &amp; CITY</u>	<u>PRODUCER</u>	<u>YEAR BUILT*</u>	<u>CELL TYPE</u>	<u>CONTAINER**</u>	<u>NOTES</u>
Alabama					
Burkville	SABIC Innovative Plastics	1987	OxyTech H2A diaph., mem. '96 Eltech memb. '01	- -	1
McIntosh	Olin Corporation	1952	OxyTech H4 diaph.'77, '78	S B	1
	Olin/Geon (joint venture)	1997	Uhde membrane '04, '06, '07	S B	1
Mobile	Occidental Chemical Corp.	1964	OxyTech MGC memb. '91, '94	S -	2
Muscle Shoals	Occidental Chemical Corp.	1952	De Nora 12 x 3 merc.	S -	2
Delaware					
Delaware City	Kuehne Chemical	2000	ICI FM-1500 memb.	- -	1, 11
Georgia					
Augusta	Olin Corporation	1965	Olin E11F merc.	S -	1
Indiana					
Mt. Vernon	SABIC Innovative Plastics	1976	OxyTech H2A diaph.'95, >96	- -	1
Kansas					
Wichita	Occidental Chemical Corp.	1952	OxyTech HC3BT, H4 '75 diaph. OxyTech membrane '83	S -	1
Kentucky					
Calvert City	Westlake CA&O Corp.	1966	De Nora 24H5 merc. - converted to membrane Feb. '02	S -	1
Louisiana					
Convent	Occidental Chemical Corp.	1981	OxyTech MDC55 diaph.'95	S B	1
Geismar	Occidental Chemical Corp.	1976	OxyTech MDC55 diaph.	- -	1
		2000	BITAC Bipolar Memb. '00	- -	1
Lake Charles	PPG Industries, Inc.	1947	Chlorine Engineers, memb. '07 Glanor 1144 diaph.'77, '80 Bipolar 1161 diaph. '83	S B	1
Plaquemine	Dow Chemical USA	1958	Dow diaph.	S -	1
Plaquemine	Georgia Gulf Corporation	1975	OxyTech H4 diaph.'95, '96	S -	1
St. Gabriel	Olin Corporation	1970	Uhde 30 sq. m. merc.	S -	1
Taft	Occidental Chemical Corp.	1966	OxyTech HC4B, H4 '75 diaph OxyTech MGC membrane '86 OxyTech MGC membrane '98	S -	1
Nevada					
Henderson	Olin Corporation	1942	OxyTech MDC29 diaph.'76,'95	S W	1
Henderson	<i>Titanium Metals of America</i>	1943	<i>I.G. Farben magnesium</i>	- -	9

**NOTES**

Italicization denotes non-members of the Chlorine Institute

Years shown in "Cells" column indicate additions of production capacity.

\* Refers to year chlorine production started at location.

\*\* Refers to bulk chlorine containers filled at plant

\*\*\* Not currently operating

**Table 1: Chlorine Plants in the United States - Continued (Not including plants being built)**

<u>STATE &amp; CITY</u> <u>PRODUCER</u>		<u>YEAR BUILT*</u>	<u>CELL TYPE</u>	<u>CONTAINER**</u>	<u>NOTES</u>
New York					
Niagara Falls	E.I. du Pont de Nemours & Co.	1898	Downs sodium	- -	4
Niagara Falls	Occidental Chemical Corp.	1898	OxyTech H4 diaph. '74, '78	S -	1
Niagara Falls	Olin Corporation	1987	Asahi Chemical membrane '87, '97	S -	1
North Carolina					
Hamlet	Trans Carolina Products, LLC	2007	Uhdenora 4A		1
Ohio					
Ashtabula	ASHTA Chemicals, Inc.	1963	Olin E11F merc.	S -	2
Tennessee					
Charleston	Olin Corporation	1962	Olin E11F, E812 merc.	S B	1
Texas					
Point Comfort	Formosa Plastics	1993	Membrane	- -	1
			Membrane cells added 9/98		
Baytown	Bayer Corporation	1972	Uhde (HCl) & BiTAC membrane	- -	5,1
Ingleside	Occidental Chemical Corp.	1974	OxyTech MDC-55 diaph.	S -	1
			OxyTech MDC-55 diaph. 7/98, 12/05		
Freeport	Dow Chemical USA	1940	Dow diaph., Dow magnesium, '96	S -	1,9
			Membrane cells added '99		
La Porte	Occidental Chemical Corp.	1974	OxyTech MDC 29 diaph.	S -	1
Utah					
Rowley	US Magnesium LLC	1972	'M' cells; AMAX	S -	9
Washington					
Longview	Equa-Chlor	2006	Ineos FM-21SP	S-	1
West Virginia					
New Martinsville	PPG Industries, Inc.	1943	Columbia N3, N6 diaph.	S B	1
			Uhde 20 sq. m. merc. '58		
			OxyTech MDC55 diaph.'84		
Wisconsin					
Port Edwards	ERCO Worldwide (USA) Inc.	1967	De Nora 24H5 merc.	S -	3

**NOTES**

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Years shown in "Cells" column indicate additions of production capacity.

\* Refers to year chlorine production started at location.

\*\* Refers to bulk chlorine containers filled at plant